



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,388	01/02/2004	Eldad Taub	25306Y	9142

20529 7590 02/23/2006

NATH & ASSOCIATES  
112 South West Street  
Alexandria, VA 22314

EXAMINER
----------

WILSON, JOHN J

ART UNIT	PAPER NUMBER
----------	--------------

3732

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/749,388

Applicant(s)

TAUB ET AL.

Examiner

John J. Wilson

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 27-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/30/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sachdeva et al (6350120) in view of Wu et al (5338198). Sachdeva shows a method using a computer to select virtual components including virtual components that represent standard brackets from an electronic library of brackets, column 6, lines 24-35, providing a three dimensional virtual image model, see step 60 in Fig. 4, associating the virtual components with the model, step 64, computing the manner of movement of the teeth, step 74 and column 6, lines 36-59, selecting a component for use, column 7, lines 1-6 and using similar brackets in treatment, column 7, lines 58-67. Sachdeva does not show a model being manipulable so as to allow viewing from a desired direction. Wu teaches electronic models that can be viewed from any perspective, column 1, lines 20-25. It would be obvious to one of ordinary skill in the art to modify Doyle to include the function of allowing the models to be viewed from different directions as shown by Wu in order to make use of a well known computer graphics tool for computer graphics design. Sachdeva also teaches that if tooth movement is not favorable, then the method selects another bracket from the library of digital brackets. This inherently generates a set of brackets, not originally input by the user, and as such, inherently generates a new prescription for treatment. It is held that communication of this newly generated set of components to the user is inherent

and/or obvious in the teaching of Sachdeva, and that such communication inherently comprises a prescription. As to claim 50, when the taught standard brackets of Sachdeva are used, the virtual brackets representing these standard brackets inherently provides a virtual set that simulates real life components. To store rules in a data base and the type of data base used are obvious matters of choice in the use of known storage types to the skilled artisan. To include extracted or restored teeth in the calculations is well known in modeling orthodontic treatment.

Claims 27-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al (5870158) in view of Wu et al (5338198). Doyle shows a method including selecting virtual components representing conventional components, column 7, lines 11-18, providing a first three dimensional virtual image, see steps 12, 14 and 16 in Fig. 3a, associating the virtual set of orthodontic components to obtain a second three dimensional image, see steps 26, 28, 30 and 31, Figs. 3a and 3b, associating brackets with the teeth, step 31, computing, using a set of rules, the effect of the bracket on the teeth, see steps 36, 38, 40, 42, 44, 46, 51, 53, 55 and 57, a third image of the teeth in the final position, column 13, lines 21-23. The third image is obviously, to the skilled artisan, a result of the rules that were used. Doyle does not show a model being manipulable so as to allow viewing from a desired direction. Wu teaches electronic models that can be viewed from any perspective, column 1, lines 20-25. It would be obvious to one of ordinary skill in the art to modify Doyle to include the function of allowing the models to be viewed from different directions as shown by Wu in order to make use of a well known computer graphics tool for computer graphics design. Doyle generates a prescription including jigs and brackets based on the virtual treatment. As to claim 28 and 30, Doyle shows several

Art Unit: 3732

loops, Fig. 3b, to repeat steps is an obvious matter of choice to one of ordinary skill in the art to obtain the desired results. As to claim 29, see upper and lower jaws at column 5, lines 1-3 or Doyle. As to claim 34, Doyle shows a system, Fig. 16, including storage means 186, user interface, 188, processor 172, display 190, and teaches the function of this system as described above. As to claim 35, see manual selecting, column 6, lines 20-30 of Doyle. The specific rules used and to use extracted or added teeth or a crown are an obvious matter of choice in the known parameters for moving teeth to one of ordinary skill in the art.

Claims 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al (5870158) in view of Wu et al (5338198) and Guess et al (Computer Treatment Estimates in Orthodontics and Orthognathic Surgery”, Journal of Clinical Orthodontics). Doyle shows a method including selecting virtual components representing conventional components, column 7, lines 11-18, providing a first three dimensional virtual image, see steps 12, 14 and 16 in Fig. 3a, associating the virtual set of orthodontic components to obtain a second three dimensional image, see steps 26, 28, 30 and 31, Figs. 3a and 3b, associating brackets with the teeth, step 31, computing, using a set of rules, the effect of the bracket on the teeth, see steps 36, 38, 40, 42, 44, 46, 51, 53, 55 and 57, a third image of the teeth in the final position, column 13, lines 21-23. The third image is obviously, to the skilled artisan, a result of the rules that were used. Doyle does not show a model being manipulable so as to allow viewing from a desired direction. Wu teaches electronic models that can be viewed from any perspective, column 1, lines 20-25. It would be obvious to one of ordinary skill in the art to modify Doyle to include the function of allowing the models to be viewed from different directions as shown by Wu in order to make use

of a well known computer graphics tool for computer graphics design. The above combination does not show changing components. Guess teaches that computer modeling can be used to produce photographic estimates of a treatment plan and that the orthodontist can plan treatment based on various possible outcomes in appearance, fifth paragraph of page 3. It would be obvious to one of ordinary skill in the art to modify the above combination to include modeling different orthodontic components as shown by Guess in order to obtain the best treatment.

***Response to Arguments***

Applicant's arguments filed December 29, 2005 have been fully considered but they are not persuasive. Applicant's remarks that priority to PCT/IL98/00593 predates Sachdeva et al (6350120) has been considered.

Applicant is required to file a translation of the international application in order to establish that the present claimed invention is supported.

Applicant is required to certify that the international application was not withdrawn or considered to be withdrawn, either generally or as to the United States, prior to the filing date of the national application claiming benefit under 35 U.S.C. 120 and 365(c) to such international application. For further information concerning this requirement please refer to the attached copy of MPEP sections 1895 and 1895.01.

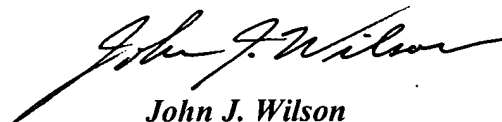
With respect to Doyle, applicant argued in the response of March 23, 2005 that Doyle does not show selecting a virtual set of components, however, Doyle does shows selecting a set of components that are entered in to the computer, and thereby, are virtual. This is held to meet the claim language.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Wilson whose telephone number is 571-272-4722). The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver, can be reached at 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**John J. Wilson**  
**Primary Examiner**  
**Art Unit 3732**

jjw  
February 17, 2006

### **Attachment from MPEP**

#### **1895 [R-2] A Continuation>, Divisional,< or Continuation- in-Part Application of a PCT Application Designating the United States**

It is possible to file a U.S. national application under 35 U.S.C. 111(a) during the pendency (prior to the abandonment) of an international application which designates the United States without completing the requirements for entering the national stage under 35 U.S.C. 371(c). The ability to take such action is based on provisions of the United States patent law. 35 U.S.C. 363 provides that “[a]n international application designating the United States shall have the effect, from its international filing date under article 11 of the treaty, of a national application for patent regularly filed in the Patent and Trademark Office....” 35 U.S.C. 371(d) indicates that failure to timely comply with the requirements of 35 U.S.C. 371(c) “shall be regarded as abandonment... by the parties thereof....” It is therefore clear that an international application which designates the United States has the effect of a pending U.S. application from the international application filing date until its abandonment as to the United States. The first sentence of 35 U.S.C. 365(c) specifically provides that “[i]n accordance with the conditions and requirements of section 120 of this title,... a national application shall be entitled to the benefit of the filing date of a prior international application designating the United States.” The condition of 35 U.S.C. 120 relating to the time of filing requires the later application to be filed before the patenting or abandonment of or termination of proceedings on the first application. The filing of continuations \*\* of an international (PCT) application designating the U.S. was used primarily in instances where there was difficulty in obtaining a signed oath or declaration by the expiration of the time for entry into the national stage. Because these continuation \*\* applications historically resulted from a need to bypass the requirements of 35 U.S.C. 371, they became known as “bypass” applications. Since applicants are now notified of missing or defective oaths or declarations and/or translations, and are given a time period to respond which is extendable under 37 CFR 1.136(a), the use of this practice >with respect to continuation applications< has diminished. \*\*>Continuation-in-part applications are generally filed in instances where applicants seek to add matter to the disclosure which is not supported by the disclosure of the international application as originally filed, as new matter may not be added to a U.S. national stage application. See 37 CFR 1.121(f).<

#### **1895.01 [R-3] Handling of and Considerations in the Handling of Continuations, Divisions, and Continuations-In-Part of PCT Applications**

Rather than submitting national stage application papers under 35 U.S.C. 371, a continuing application (i.e., continuation, C-I-P, or division) under 35 U.S.C. 111(a) of the international (PCT) application may be filed. Pursuant to 35 U.S.C. 365(c), a regular national application filed under 35 U.S.C. 111(a) and 37 CFR 1.53(b) (not under 37 CFR 1.53(d)\*\*) may claim benefit of the filing date of an international application which designates the United States.

To obtain benefit under 35 U.S.C. 120 and 365(c) of a prior international application



Art Unit: 3732

designating the U.S., the continuing application must:

(A) include a specific reference to the prior international application (either in the application data sheet (37 CFR 1.76) or in the first sentence>(s)< of the specification),

(B) be copending with the prior international application, and

(C) have at least one inventor in common with the prior international application.

With regard to (A), the specific reference to the international application required under 35 U.S.C. 120 and 365(c) must either be contained in the first sentence>(s)< of the specification >following the title< or included in an application data sheet. 37 CFR 1.78(a)(2)(iii). The specific reference must identify the parent international application by international application number and international filing date and indicate the relationship of the applications (i.e., continuation, continuation-in-part, or division). See 37 CFR 1.78(a)(2)(i) and MPEP § 201.11. An example of an appropriate first sentence of the specification is, for example, "This is a continuation of International Application PCT/EP2004/000000, with an international filing date of January 5, 2004, now abandoned." The required reference must be submitted within the time period provided by 37 CFR 1.78(a)(5)(ii). This time period is not extendable. A certified copy of the international application (and an English translation) of the international application may be required by the examiner to perfect the claim for benefit under 35 U.S.C. 120 and 365(c) if the international application did not originate in the United States and such is necessary, for example, where an intervening reference is found and applied in a rejection of one or more claims. If the international application was published by the International Bureau pursuant to PCT Article 21, then a certified copy would not normally be necessary.

If benefit under 35 U.S.C. 119(e), 120 and 365(c) is also being claimed to an earlier filed national application (or international application designating the U.S.) via an intermediate international application designating the U.S., the examiner must examine the intermediate international application to see if it contains a proper reference to the earlier application. The reference will usually be included on the cover page of the published international application and/or may appear in the first sentence>(s)< of the description of the published application. A lack of a proper reference in the published international application does not necessarily mean that a proper reference is not contained in the second international application. Accordingly, the examiner may need to inspect the Home Copy of the international application (if the USPTO was the receiving Office) to determine whether the requirements under 37 CFR 1.78(a) have been satisfied. For example, the Home Copy file may contain a proper reference in a separate paper or a decision granting a petition to accept a late benefit claim may be present in the application file. See MPEP § 201.11(a).

With regard to (B), a U.S. national application is considered copending with a prior international application designating the U.S. if the international application was pending on the filing date of the U.S. national application. Generally, except in cases where the international application has been withdrawn (either generally or as to the United States), an international application becomes abandoned as to the United States upon expiration of 30 months from the priority date (i.e., the priority date claimed in the international

Art Unit: 3732

application or, if no priority is claimed, the international filing date) unless a proper submission under 35 U.S.C. 371 to enter the U.S. national phase is filed prior to the expiration of this 30-month period. See MPEP § 1893.01(a)(1) and § 1893.02.

However, if the international application is one where the 20-month period from the priority date expired before April 1, 2002, then it was necessary to file a demand electing the United States prior to the expiration of 19 months from the priority date in order to extend the international phase to 30 months from the priority date. If such a demand was not timely filed, then under former 37 CFR 1.494, such an international application became abandoned at the expiration of 20 months from the priority date unless a proper submission under 35 U.S.C. 371 to enter the U.S. national phase was made prior to the expiration of 20 months from the priority date. Accordingly, if the international application is not subject to the filing of a demand in order to delay entry into the U.S. national phase to 30 months from the priority date, then a national application filed prior to the expiration of this 30 month period will be copending with the international application unless the international application was withdrawn, either generally or as to the United States, prior to the filing of the national application. To determine whether the application was withdrawn, the examiner must either review the Home Copy of the international application file (if the USPTO was the receiving Office), or require applicant to certify that the international application was not withdrawn or considered to be withdrawn, either generally or as to the United States, prior to the filing date of the national application claiming benefit under 35 U.S.C. 120 and 365(c) to such international application. >In order to expedite examination, applicant should certify at the time of filing a national application claiming benefit under 35 U.S.C. 120 and 365(c) to an international application that the international application has not been withdrawn.< If the national application claiming benefit to the international application was filed after the expiration of this 30-month period, then there will be no copendency in the absence of a timely and proper submission to enter the U.S. national phase under 35 U.S.C. 371. The existence of a national stage application may be checked through PALM and the records of the national stage application should be consulted to verify copendency. Additionally, if the 20-month period from the priority date of the international application expired before April 1, 2002 and the national application claiming benefit under 35 U.S.C. 120 and 365(c) was filed later than 20 months from the priority date of the international application, the applicant may be required to submit proof of the filing of a demand electing the United States within 19 months from the priority date. This proof may be in the form of a copy of the "Notification of Receipt of Demand by Competent International Preliminary Examining Authority" (Form PCT/IPEA/402) showing the demand was received prior to the expiration of 19 months from the priority date, and a copy of the "Notification Concerning Elected Offices Notified of Their Election" (Form PCT/IB/332) showing the election of the United States. If the parent international application was not copending (i.e., abandoned or withdrawn), benefit under 35 U.S.C. 120 is not possible.

With regard to (C), inventors will normally be identified on the cover page of the published international application. In addition, such information is indicated in the PCT Gazette, which is available in electronic form from WIPO's web site ([www.wipo.int/pct/en/index.html](http://www.wipo.int/pct/en/index.html)).